

Return and Repetition: Methodological Enquiries in Material Culture Studies

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Return and Repetition:

Methodological Enquiries in Material Culture Studies¹

Repetition's centrality to knowledge production has long been recognised in scientific research. Since the major debates concerning experimentation and the integrity of knowledge emerged in the seventeenth century, the repetition of discrete experiments has remained fundamental to refining knowledge of the natural world.² Alongside scientific research practice, repetition is also understood to be an important tool in some fields of humanities research, such as literary studies and art history. In these disciplines, scholars repeatedly return to texts and images to build interpretations, questioning with each new encounter to develop critically engaged understandings. In historical studies repeated encounters with sources to generate interpretations are also understood to be of importance. Yet, such repetitions rarely attract critical attention as a particular research technique that distinctly influences the sorts of interpretations historians construct. In response, this research note explores repetition and its importance as a technique within historical research practice. It considers how our modes of approaching repeated encounters with sources are distinctly shaped by other disciplines (such as literary studies, art history and the creative arts) and discusses how repetition is specifically pertinent to historical research concerned with objects and the material world. In sum, it suggests that scholars must reconceptualise material culture research as a form of practice conducted with objects. Based on findings from the *100 Hours* project, which took place at University College London in 2013 and 2014, what follows is an examination of how repetition has been used by a range of disciplines as a method of investigating objects of study and seeks to show how such techniques might be broadened and updated for future research practice in the field of history.

Repetition

The notion of “repetition” has been analysed extensively within philosophical literature, in particular by Gilles Deleuze in his major work *Difference and Repetition*.³ For Deleuze there are two kinds of repetition, one that is “superficial” and predicted by external factors and the other which is “profound” and the source of artistic creation: “One is negative and by default; the other positive and by excess. One is of elements, extrinsic parts, cases and times; the other is of variable internal totalities, degrees and levels.”⁴ Deleuze argues that there are “laws” and “generality” that predicate against creative forms of repetition, the latter acting dynamically and leading to “transgression”.⁵ Further, Deleuze argues that, “habit never gives rise to true [artistic] repetition”.⁶ Deleuze draws together aspects of aesthetics that had been treated separately by Immanuel Kant; namely theories of art as the form of *possible experience* and of art as the reflection of *real experience*. In doing so, he emphasises art’s capacity to produce sensation and focuses on the way in which art prompts our habits of perception to shift into modes of creation.⁷

Deleuze’s suggestion that repetition has the potential to act as a force of creativity and transgression has been particularly influential in shaping modes of working within the arts. At the same time, repetition is also understood as an important tool in the practice of some fields of humanities research. Literary scholars recognise that returning to a text is necessary in developing interpretations and analysis. For example, in the 1970s Michael Riffaterre articulated a literary methodology for handling poetry which saw the first reading of a text as an imitation – an unsatisfactory encounter - and the second reading as meaningful and revealing of the text’s significance.⁸ For Riffaterre, the first reading is one that takes place within the contained space of the text itself, whereas the re-reading takes place in dialogue with other texts and the first reading of the same text. In this way, Riffaterre saw the process of reading and re-reading as generating a dialectic not only between the text and the reader, but also between readings. In *On*

Rereading, Patricia Meyer Spacks likewise addressed this same question and suggested that in between each return to a text the scholar's perspective inevitably shifts and develops. Spacks argued that it is impossible to experience a repeated encounter without new connections and interpretations slowly emerging – without “an experience of repeated unexpected change”.⁹ For literary scholars then, a pattern can be seen: each time we go away and engage with other material, we can return anew to the original subject of our enquiry.

Repeated encounters with artworks and applied artworks have also long been an important strategy within art historical research practice. Recently, for example, in *The Sight of Death: An Experiment in Art Writing* (2006), T. J. Clark repeatedly revisited two paintings over a six-month period. The paintings were Nicolas Poussin's “Landscape with a Man Killed by a Snake” (probably 1648) and “Landscape with a Calm” (1650-51), which were displayed in the Getty Research Institute in Los Angeles.¹⁰ His book records his reflections during these repeat visits and the insights he gained as a result of applying sustained critical attention to the paintings. As such, Clark's work demonstrates the extent to which art historians have not only developed, but also critically engaged with their own use of repeated encounter within research practice. Clark's notes were written as he sat in the gallery and, whilst entries were subsequently edited, “the whole record of repetition-compulsion, warts and cosmetics and all” was retained in the final publication.¹¹ Clark's book therefore offers scholars both a record and a critical reading of the discipline of repeated looking. Clark also writes about the provisional nature of looking as opposed to the perceived certainties of writing: “Writing automatically aims, or pretends, to be attentive. It likes details. ... False vividness gives way abruptly to clever summing up.”¹² The contrast Clark identifies between the deceptive directness of writing and the slow, inconclusiveness of looking is important because it prompts us to consider how shared expectations of the pace of research and its ability to deliver publishable

results, distinctly structures our research practices. Yet, outside of art history and literary studies, the reasons why scholars return to their objects of study, and the possibilities these acts of repetition enable, has undergone limited critical attention or recognition.¹³

Material Culture and History

Archaeologists have long understood material culture evidence as central to their research practice. Amongst historians working on early periods of history productive collaborations with archaeologists and an engagement with material evidence has been commonplace for many decades. For historians of the early modern and modern periods, however, recognising material culture as a valuable means of understanding the past is a comparatively recent phenomenon and has been shaped largely by fields such as anthropology, art history and science and technology studies. Nevertheless, over the last thirty years, historical material culture studies have grown and developed, attracting greater attention. As such, early modern and modern historians have steadily come to recognise objects as particularly rich primary sources, capable of generating alternative historical perspectives on the past. In 2005, historian Leora Auslander brought to the fore the particular usefulness of objects as historical sources in her seminal article “Beyond Words”.¹⁴ In this piece, Auslander argued that material culture is important to historical research because “objects not only are the product of history, they are also active agents in history”.¹⁵ Moreover, as Auslander and others have emphasised, “people’s relation to language is not the same as their relation to things”.¹⁶ Objects offer scholars another form through which human expression can be studied. If historians are to fully research the many communities in human history that did not primarily articulate themselves through written language, greater attention needs to be given to these alternative modes of expression.¹⁷

The broad recognition of the potential of objects as sources for historians of the early modern and modern periods is further exemplified by the publication of material culture readers, survey books and review articles over the last fifteen years.¹⁸ Yet, despite a growing emphasis on object study within history, little attention has been given to when, where and how researchers handle and interpret the artefacts they study. With long traditions of textual study behind them, analysing objects poses real challenges for historians. Despite this limitation, the *process* of material culture research has resisted significant scrutiny. As Frank Trentmann remarked in his 2009 state of the field article, “Most [history] scholars have tended to take as given what material culture is and how to study it.”¹⁹ Moreover, he accuses the field of historical material culture studies of retaining a “remarkably unchanging” research agenda, despite the huge variety of objects, groups, places and periods that have received attention.²⁰ An assumption has prevailed that researchers interested in the past can incorporate objects into their repertoire of source material without thoroughly re-examining their methods of encounter.

One method for analysing objects, which has had an enduring influence across historical studies, came from the art historian Jules Prown in his seminal article “Mind in Matter: An Introduction to Material Culture Theory and Method” published in the *Winterthur Portfolio* in 1982.²¹ Prown’s approach suggested a protocol for object analysis which moved from description, through to deduction and further investigation. His analysis allowed for the examination of both aesthetic and utilitarian facets of a given object, but (perhaps unsurprisingly given Prown’s disciplinary background) stressed that the “artistic dimensions of objects ... open the way to cultural understanding”.²² His article also emphasised the importance of the “shared physiological experience” researchers can achieve with makers and the original consumers of artefacts.²³ Whilst the experiential dimension of working with material culture remains a contested subject for historians, it is of distinct relevance to the issue of repetition in historical research

practice. Implicit within Prown's methodology is the need to *repeatedly* return to a particular object to reveal its many different layers of meaning through the direct and personal experience those interactions promote. Scholars working in art history and literary studies have long utilised and valued object-centred, *intensive* interpretations that require repeated encounters with a particular source. In contrast, historians are more likely to employ *extensive* interpretations that see them encounter many different sources in sequence.²⁴ In working with objects, historians have different needs to art historians. Nevertheless, if historians are to learn from objects as evidence of non-verbal human experience then new approaches are required - approaches that examine how we greet, observe, analyse, and return to, objects.

This research note challenges historians to critically engage with the ways in which they encounter objects as primary sources and also to re-assess their research practices more broadly. To this end, it draws on concepts developed in the creative arts and seeks to apply them meaningfully by prompting scholars to reconceptualise material culture research as a form of practice conducted with objects. The insights and reflections included in this article emerged from the *100 Hours* project that took place at University College London (UCL) between September 2013 and November 2014. The project brought together twelve researchers to critically reflect on research strategies within material culture studies and primarily included researchers in the early stage of their careers.²⁵ The twelve participants came from nine different institutions²⁶ and a range of arts, humanities and social science disciplines.²⁷ They were each required to choose one object from UCL's diverse museum collections and to commit to returning to that same object multiple times over the course of a year.²⁸ Each researcher deliberately chose an object from UCL's collections that sat outside of their subject specialism or period.²⁹ After choosing their particular object, members were encouraged to visit it as frequently as possible. Alongside such individual "visits" the researchers also met five times as a

group in order to engage in a series of discussions led by other “external” specialists from anthropology, literary studies, art and history of science.³⁰ Prior to each meeting the participants were encouraged to read a short written piece, which would introduce a particular framework for discussion and deconstruction during the meeting.³¹ After each meeting the participants applied the approach discussed to their own object and documented their response in a short post on the *100 Hours* website (www.ucl100hours.wordpress.com). Through these posts, the project recorded its reflections in real time and collectively accumulated “100 hours” of looking, considering and discussing their chosen objects.

The central intention of the *100 Hours* process was to create a space in which early career researchers could come together to ask questions of material things without a predetermined outcome. The space that the project sought to create was one in which play and experimentation were encouraged. We asked ourselves: what are the assumptions that shape (and perhaps limit) our encounters with objects during research? Can repeated acts of attention on an object reveal new ways of analysing it and, if so, how? How does our writing-up of these encounters change their meaning? Repeated returns to the object of study anchored the research while challenging participants to consider what they were doing and thinking as they engaged with objects. While broadening research practice, spaces of exploration and habits of open curiosity also act as important foils against academic environments increasingly focused on defined outputs (particularly for early career scholars). Ultimately this research note, and the *100 Hours* project that preceded it, seeks to prompt scholars undertaking historically-focused research to consider what their research practice consists of and how they can work to broaden and deepen their repertoires of thinking, playing, reading, writing, discussing, making and engaging. It asks, what happens when a range of humanities scholars, but

historians more particularly, use repetition in their research practice? How can historians borrow from and critically reflect upon methodologies used in other disciplines?

Cultivating Critical Intimacy

For historians, one of the immediate barriers to working with objects is a professional culture that remains disconnected from hands-on, materially focused practices. Beyond turning the pages of a manuscript, most historians lack the range of material literacies that would support the detailed examination of artefacts. Nevertheless, the need for material literacy and material encounters as a key part of research practice is growing. With scholars such as Richard Sennett emphasising the connections between making and the imagination, and a wider social phenomenon that has seen the proliferation of makers' spaces and hacker culture, material literacy is a subject of the moment.³² Moreover, a growing interest in researching material presence, rather than the semiotic importance of objects, demands that we reconsider our methods of research. Rather than, as Bill Brown asserts, continuing to look through objects "to see what they disclose about history, society, nature, or culture – above all what they disclose about *us*", historians are coming to look at *things* in their own right to consider what they do more broadly.³³

After an initial intervention by Bruno Latour, more recent work by philosophers such as Graham Harman, Ian Bogost and Timothy Morton and political theorist Jane Bennett, is beginning to deeply shape the historical field.³⁴ These scholars largely understand their work as promoting an object-oriented ontology in which things do not simply exist in relationship to humans, but rather as particular entities with relationships to other things. At the same time, they contend that in new forms of social analysis, nothing should acquire special status, but rather that everything from sandstone to DVDs and from plumbers to albatrosses, should be scrutinized through the same

encompassing analytical lens. Historians are increasingly coming to see the material world, therefore, as one defined both by material presence, which has the potential to enact change in historical processes, and as one bound by systems and encounters.³⁵ Yet, with a theoretical push towards object-oriented ontology and understanding material presence, we must be careful not to assume that the material world is present and self-evident when we come to attend to it in our research. At the same time, while historians increasingly begin to engage with the material world as infrastructure and built environment, rather than smaller objects such as handkerchiefs or mahogany tables, it is important that they do not withdraw from physically engaging with and encountering things as part of their research practice.³⁶ As such, it is important to ask: whether big or small, how do we attend to and make the material world legible to our own understanding? What does repetition offer this endeavour?

The Whistle



Figure 1. Galton's Whistle, Galton Collection, UCL.

The scientist Francis Galton (1822-1911) primarily researched hereditary and biological variation in the human species. In 1869, he published *Hereditary Genius: An Inquiry into its Laws and Consequences*, in which he argued that “man’s natural abilities are derived by inheritance” and that, therefore, it was possible to work towards the “degradation” or “improvement” of humanity through “judicious” breeding.³⁷ Although never employed by University College London (UCL), Galton became attached to the institution through working closely with two of its professors – Karl Pearson and Flinders Petrie. On his death in 1911 he bequeathed money to UCL to establish a Chair of Eugenics, he also left the university a collection of objects, which included a whistle (see Fig. 1).

In his research, Galton constructed data sets recording measurements of human physiology. By the 1880s, he had set up a series of anthropometric laboratories, which measured and recorded various physiological characteristics including eye, hair and skin colour, head measurements, arm span, breathing capacity and hearing.³⁸ Measuring and recording these different characteristics relied upon the creation of particular technologies and he created a whistle to measure hearing pitch. Writing in 1885 Galton noted how “measurements were made with five whistles set to emit 10, 20, 30, 40 and 50 thousand vibrations per second respectively”.³⁹ By submitting subjects to these tests, Galton was able to draw conclusions regarding the hearing abilities of different groups. In comparing men and women he found that “as in every other faculty” “the male surpasses the female”. He noted that that while “18 per cent of the males tested hear the shrillest test notes” only 11 per cent of females were able to do the same.⁴⁰

Alongside testing human hearing capacities, Galton was also keen to examine how hearing operated in other species. In tackling this question Galton again faced problems of technology, he noted that he “tried several plans for obtaining acute notes” the one he finally adopted was “a very small whistle, whose internal diameter was much less than one-tenth of an inch”.⁴¹ He used this instrument on animals by venturing out

into different spaces with a hollow walking stick, to which he had attached a whistle at one end and an Indian rubber ball at the other. He took it to the Zoological Gardens and once the animals were used to having the stick near them he made a squeeze on the ball and then watched to see whether the animals pricked their ears. He also tried his device on cats, mice and dogs. He found that while small dogs (like cats) heard very shrill notes, large dogs did not. Travelling to Berne where “there appear to be more large dogs”, Galton was pleased to have his suspicions confirmed – he “tried the whistle for hours together, on a great many large dogs, but could not find one that heard it”.⁴²

That Galton put his whistle to such uses appears pertinent when we learn that elements of his whistle appear to have later been used as important (yet often controversial) devices in dog training. Understanding that the whistle created by Galton, and more particularly its ability to change pitch and tone, came to influence methods of dog training, does not arise from the object itself, instead such understanding arises from time spent in the Kennel Club archive, carefully reading different documents to create an idea of connection. Hence, while the historical artefact featured (see Fig. 1) might appear important to the construction of such narratives, it does not have to be. Such narratives can be told without every really encountering the object at all. But encountering the object repetitively and actively is revealing and important, it changes understandings and prompt questions. Objects, rather than the textual revelations they are so often asked to represent, can act as a friction, the horizon against which researchers butt.

In her 2008 article “Intimacy in research”, Carolyn Steedman asked whether historians become intimate with the historical actors they study simply by reading much of their writing.⁴³ Similarly, we might ask: can researchers become “intimate” with objects by spending time with them? Handling an object allows us to build a somatic memory of it – but it is returning to that object and the disruptive nature of repetition that allows our experience of it to grow. Intimacy is, however, not simply a matter of close

observation and knowledge, it is also concerned with connection and recognition. Steedman notes that one of her most important nodal points of intimacy with the historical actors she studies is often through “the charm of recognition” that occurs when what they write can be linked to a specific action. For Steedman then “It is in action described that we find ourselves in the greatest intimacy with the dead and gone” – it is about reading a note on chopping an onion and then being able to chop an onion in the same way.⁴⁴ Such connection is also often cited as explaining the potency of material culture – that we can grasp the object and be transported back. The work of scholars such as Constance Classen and David Howes has made such readings deeply problematic as perceptions and sensory encounters become increasingly understood to be historically and culturally contingent. Nevertheless “the charm of recognition” is compelling because researchers have all experienced those (infrequent) moments of understanding. With objects, this research note argues, such moments are often dependent on return.

In encountering the whistle, it was the third visit that proved important (out of around seven visits in total).⁴⁵ Prior to this visit the *100 Hours* group had engaged in a session led by historian of science Graham D. Burnett and practising artist Sal Randolph in which we were encouraged to silently attend to a specific set of objects (a collection of ten pound notes) over a twenty-minute period. Such practice encouraged the *100 Hours* group to question the quality of attention we offer to the material world and the technologies of looking and encounter we deploy.⁴⁶ Returning to the whistle a third time, I considered more self-consciously how I attended to the thing at hand. In this encounter, I again handled, took time, looked but I also paused and then kept looking and kept handling. Through taking this time I began to get suspicious of the object and its seemingly self-evident presence. I began to wonder whether it really could be considered a single object at all. Away from the object, further research into later

examples completed, it seemed clear that the whistle under consideration could more reasonably be understood as a set of objects and that the set was incomplete. If these pieces were assembled together they could not be made into a complete “whistle”.

In spending time with the set of objects under analysis, it was possible not only to begin to develop a greater historical material literacy, but also to build important rituals of attention and connection. Moreover, intimacy with objects was important not just because it allowed me to understand the material world and its historic significance in more vivid terms, but also because of the tensions and frictions it created. The whistle was incomplete. As a result, instead of being able to write the history I wanted to write on first encounter (a history of dog training), I could not. Or at least I could not begin, with this thing, quite so easily. Scrutinizing the object closely had led to findings, which disrupted any simple relationship between it and the future technologies and practices it was supposed to go on to influence. The thing prompted explorations into histories of materials, cultures of making and repairing in scientific practice, ideas of use and handling and the politics of collecting. Essentially, the material possibilities of building a clear historical lineage became more difficult.

Alongside providing an important historical insight, which prompted changing understandings of the research project undertaken, encountering the object over several months also underlined certain methodological issues. Most importantly, it revealed the complexity of encountering objects. Things, and the many presences and effects they contain are not self-evident. It is difficult to encounter them in full on anyone occasion. It is not enough then to repeatedly turn up. To be able to “see” things, it is important that researchers do more. They need to develop repertoires of attention. Through these it might be possible to cultivate what Jane Bennett has described as “a perceptual style open to the appearance of thing-power” and thus move towards a greater material intimacy and at the same time achieve “the charm of recognition”.⁴⁷ Scholars need to

bring a range of expectations and techniques to their repeated encounters with object sources in order to begin to be able to constantly see new elements and understand them as fluid and complicated historical entities.

Re-construction, Re-enactment and Re-contextualisation

The methodological insights on repetition brought to bear by art historians, literary scholars and philosophers and discussed earlier in this note, need to be understood within the broader context of practice-led research, which emphasises an iterative or cyclical process. By doing so it is possible to work towards new, historically productive, modes of repeated interaction. More than simply repeating the same encounter creative arts scholars such as Brad Haseman insist that in practice-led research any research strategy needs to evolve through repetition itself and through critical reflections upon such forms of practice.⁴⁸ Haseman has described creative practice as, “both ongoing and persistent” and suggests that, “practitioner researchers do not merely ‘think’ their way through or out of a problem, but rather that they ‘practice’ to a resolution”.⁴⁹ Haseman’s intervention has a history and distinctly echoes earlier calls for the importance of practice and collaboration within the creative arts. In the early 1980s, advocates for “action research” - Peter Reason and John Rowan - were publishing on what they saw as an “emerging paradigm of co-operative experiential enquiry”, which described research that was “*with* and *for* people rather than *on* people”.⁵⁰ Reason and Rowan’s work has provided the foundations for more recent calls for practice-led approaches to be recognised as a distinct model for research, with equivalent status to quantitative or qualitative research. These approaches value “the conditions of participatory and holistic knowing, critical subjectivity and knowledge in action” and advocates maintain that they represent a “rupture with traditional research paradigms”.⁵¹ Peter Reason’s description of “co-operative enquiry” has important implications for considering the importance of

repetitive strategies: “Establishing an aware and self-critical movement between experience and reflection, which goes through several cycles as ideas, practice and experience are systematically honed and refined.”⁵² Haseman’s analysis of creative practice also chimes with more current thinking seen in Richard Sennett’s work on ideal (and often undervalued) working practices. Sennett asserts that, “Every good craftsman conducts a dialogue between concrete practices and thinking; this dialogue evolves into sustaining habits, and these habits establish a rhythm between problem solving and problem finding.”⁵³

Clearly there are significant differences between the aims of artists and those of historians – the former engaged in the expression of human experience and the latter intent on analysing evidence of past human occurrence. Nevertheless, whilst the creative arts and history have different objectives, some features of creative practice can be of use to historical researchers and suggest at the need for historians interested in material culture to increasingly look beyond art history, literary studies, anthropology and archaeology to find new means of investigating the material world. Haseman’s concept of *practising to a resolution* presents a productive way forward for historical material culture studies and suggests that returning to an object (or image or text) over and over again exists as a fruitful strategy for knowledge production if with each repetition the approach used evolves and develops. By practising *active* repetitions, it is possible to generate new insights through committing to open-ended research.⁵⁴

This research note argues then that it is necessary for practitioners to do more than simply return. Through repeated encounters they must work to cultivate a “critical intimacy” with objects by developing a broad repertoire of methods to enrich and enliven research practice over time. Writing on the craft of experimental physics, Patrick Blackett encourages experimental physicists to hone their skills in order to “cultivate an intimacy with the physical world”.⁵⁵ Blackett’s challenge is an important rallying cry for

scholars interested in understanding the “what” and “how” of the physical world. Rather than “reading”, scholars confronting material culture need to cultivate forms of intimacy – understood as a closeness of observation and understanding, as well as a close connection. Nevertheless, opening a form of awareness and attention that allows for such encounters to occur remains problematic. Jane Bennett has written eloquently about the importance and challenges of developing “a perceptual style open to the appearance of thing-power”.⁵⁶ Despite its difficulty, this research note argues that such forms of intimacy remain important endeavours. As such, it seeks to promote the benefits of developing knowledge of objects through repeated interactions, each of which allows for a new lens to be actively applied and reflected upon in order that we might attend to the fullness of what is before us. In essence then, this note asserts that the first meeting with a text or object is an inadequate indicator of future insights, in the sense that long-held assumptions firmly guide the conclusions drawn. However, a second, third, fourth or fifth interaction with a given source leaves open the possibility for alternative perspectives to emerge. By returning, the researcher has the opportunity to follow directions that, at first, seem obscure. Or, at least, to proceed with their investigation with enhanced critical insight around the assumptions they had held on first seeing the material in question. At the same time, each researcher must bolster their capabilities of applying a critical distance in return engagements by developing new lenses through which to greet objects on each meeting.

While scholars such as Frank Trentmann have critiqued the “remarkably unchanging” research agenda within historical material culture studies, forming exploratory research practices not only offers an important means of encountering but also has the potential to open up new avenues of enquiry.⁵⁷ For those of us working in the humanities and social sciences, such a consciously experiential approach to research can feel alien. For one, the results of “practising to a resolution” often seem over

personal (even self-indulgent), particular and difficult to generalise. At the same time, the means of sustaining a practice of curious, open-ended and repetitive engagement with the material world is not self-evident. Rather it requires the development of strategies, methods and discipline to be able to move beyond looking to understanding and to produce knowledge while resisting the traps of perceived familiarity. As illustrated by the example of the whistle, new ways of approaching the object needed to be found to illuminate each encounter and greet the object anew. How then might researchers cultivate still broader repertoires of encounter for each repetition? In confronting the need for strategies to develop and hone the nature of repeated encounters, three techniques might offer significant ways forward. This research note argues that reconstruction, re-enactment and re-contextualisation might provide an initial means by which scholars could begin to engage with objects in different ways. In these ways, it suggests, researchers can foster critical intimacies with the material world.

Amy Bentley has argued that objects (like events) “require multiple perspectives and readings”. They can only be understood and interpreted through engagement with “multiple sources of data (texts, objects, quantitative data, lived experience, hands-on knowledge) acquired in a multi-sensory fashion, firmly grounded in and maintaining a credible link with existing knowledge”.⁵⁸ Scholars must recognise the embodied nature of their interactions with objects and work to assess the means by which their bodies can learn to engage with objects anew over the span of their research practice. Like Bentley, Auslander argues that hands-on knowledge (such as furniture making) allows scholars a different means by which to understand objects.⁵⁹ By understanding current practices of making, a greater material literacy is acquired by the scholar and a deeper knowledge of the make-up of materials and the investment of labour can be calibrated. Hands-on knowledge of current techniques and materials offers insights into the nature of past materials and techniques, but it also creates problems in that material, embodied

knowledge and techniques are far from ahistorical. Nevertheless, by engaging with the experiential, other emphases can be brought to bear – emphases that are not driven solely by language. Whilst we rightly retain a scepticism about the connection between material experience in the present and material experience in the past, a hands-on study is no more messy, emotional and subjective than a reading is tidy, clean and objective. By amplifying the hands-on or the experiential, it is possible to release different, but nonetheless important, meanings and understandings.

Alongside hands-on knowledge as a route to understanding objects, scholars have also looked to re-enactment to comprehend the material cultures and practices of the past.⁶⁰ Working with practising silversmith and conservator Tonny Beentjes, historian of science Pamela H. Smith reconstructed a series of life casting processes described in Ms. Fr. 640, a sixteenth-century manuscript containing detailed recipes written by a French metalworker.⁶¹ Historians of science have long benefited from recreating particular scientific experiments.⁶² Smith and Beentjes’ reconstruction, likewise, allowed for a greater understanding of the labour and skill involved in life casting, the ways in which the workers understood the material world and what the original object looked like on first making. While the changing nature of materials make such reconstructions deeply complex in deciphering their historical value, re-enactments have born fruit.⁶³ Re-enactment allows historians to decipher how objects were produced in the past, but it also allows for a greater understanding of how historical actors used and understood them.

Another means of knowing objects is through re-contextualising them in multiple different ways. As a group, the *100 Hours* researchers chose a range of objects that were similar only in their particularity. Rather than the everyday and banal, researchers selected objects that were atypical: dodo bones, a ten-legged stool, a plaster cast of a child’s foot, a meteorite. In choosing these objects, the *100 Hours* team formed a new “collection”,

never previously considered together as a group. These choices shaped the juxtapositions created, the connections made and the questions asked. At the same time, by picking out these particular objects and spending time with them, the researchers also changed the objects, affecting how they were seen within the existing collections and their presence within the setting of a university museum. Previously background, these objects came to the foreground. Dressed down, dusted off and attended to.

Any one object is a composite of parts and any one object is also, always, a part of a larger assemblage.⁶⁴ Coming to understand an object requires placing it in different contexts, putting it in contact with a range of other objects and environments. In forming a new assemblage of things and placing them consistently in dialogue with each other and new frameworks allows researchers to greet them in new contexts and learn how they might react and situate themselves anew. Re-contextualisation then provides one strategy for becoming more familiar with particular objects and prompts researchers to consider and build a range of different understandings and meanings, often (and most productively) in tandem with other scholars.

Re-construction, re-enactment and re-contextualisation demonstrate that the external “sources” we use to interpret an object are not always texts, objects and quantitative data. Embodied engagements with objects provide a means of “knowing”.⁶⁵ Moreover, such encounters cannot be understood as uniform, but rather need to be seen as shaped and developed through learning particular practices (such as furniture making), gaining a broader somatic memory of materials (through engagement with a range of objects) and visiting different environments. Considering how objects might be acknowledged and attended to meaningfully, highlights not only the importance of reading, description and analysis, but rather of the need to cultivate critical intimacies as a part of active research practice. Historians need to do more than become familiar with

objects. They need to establish relationships with them through marking their responses to different situations, investigating them and their making and even remaking them.

Conclusion

In conclusion, this research note has argued in favour of the use of repetition as an historical research method that can respond to the complexities of analysing material culture and do so in ways that prompt new pathways for enquiry. As we work in a research context that has emphatically embraced the material world, historians are increasingly engaged in topics that deal with embodied material experience, rather than more abstract notions of materiality. If historians are to respond adequately, and imaginatively, to this “material turn” then we must develop new repertoires of material literacy. Such repertoires can be achieved through spending time with objects of study, and through doing so repeatedly.

¹ The authors are grateful to the *100 Hours* researchers: Katy Barrett, Tullia Giersberg, Liz Haines, Elin Jones, Juliette Kristensen, Sarah Longair, Emily Orr, Mat Paskins, James Paz and Florian Roithmayr and the project discussants: Graham D. Burnett, Ludovic Coupaye, Chris

² However, as Steven Shapin and Simon Schaffer have shown, key scientific notions - such as fact and interpretation - are inevitably entangled with the material, social and political realities of experimental practice, see Steven Shapin and Simon Schaffer, *The Leviathan and the Air Pump: Hobbes, Boyle, and the Experimental Life* (Princeton, N.J., 1985).

³ Gilles Deleuze, *Différence et Répétition* (Paris, 1968), translated into English by Paul Patton and published as: *Difference and Repetition* in 1994; for other influential philosophical treatments of this concept see Søren Kierkegaard, *Repetition: An essay in experimental psychology* (New York, 1964) and Jacques Derrida, ‘Différance’, *Margins of Philosophy* (Brighton, 1982).

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- ⁴ Gilles Deleuze, *Difference and Repetition* (London, 1994), 358-9.
- ⁵ Deleuze, *Difference and Repetition*, 1-6.
- ⁶ Deleuze, *Difference and Repetition*, 5.
- ⁷ Keith Ansell Pearson (ed.), *Deleuze and Philosophy: the difference engineer* (London, 1997).
- ⁸ Michael Riffaterre, *Semiotics of Poetry* (Bloomington, 1978), esp. 4-5, 90.
- ⁹ Patricia M. Spacks, *On Rereading* (Cambridge, MA., 2011), 2. This is a point that Deleuze also makes when he says that no repetition is the same as the last and that repetition is, therefore, a creative force, see Deleuze, *Difference and Repetition*, 3-6.
- ¹⁰ Timothy J. Clark, *The Sight of Death: An Experiment in Art Writing* (New Haven and London, 2006). Please note that 'Landscape with a Man Killed by a Snake' belongs to the collection of the National Gallery, London.
- ¹¹ Clark, *The Sight of Death*, 9.
- ¹² Ibid.
- ¹³ Clark, *The Sight of Death*, 4-13.
- ¹⁴ Leora Auslander, "Beyond Words," *American Historical Review* 110 (2005), 1015-1045.
- ¹⁵ Auslander, "Beyond Words," 1017.
- ¹⁷ Ibid., 1018.
- ¹⁸ See for example Ian Woodward, *Understanding Material Culture* (London, 2007); Victor Buchli, ed., *The Material Culture Reader* (Oxford, 2002); Christopher Tilley, Webb Keane, Susanne Kuechler, Mike Rowlands and Patricia Spyer, eds., *Handbook of Material Culture* (London, 2006); Leora Auslander, Amy Bentley, Leor Halevi, H. Otto Sibum and Christopher Witmore, "AHR Conversation: Historians and the Study of Material Culture," *The American Historical Review* 114 (2009), 1354-1404; Frank Trentmann, "Materiality in the Future of History: Things, Practices, and Politics," *Journal of British Studies* 48 (2009), 283-307; Fiona Candlin, and Raiford Guins, eds., *The Object Reader* (London, 2009); Chris Caple, *Objects: Reluctant Witnesses to the Past* (London, 2006); Karen Harvey, ed., *History and Material Culture: A Student's Guide to Approaching Alternative Sources* (London, 2009) and Anne Gerritsen and Giorgio Riello, eds., *Writing Material Culture History* (London and New York, 2014).

¹⁹ Trentmann, “Materiality in the Future of History,” 285.

²⁰ Ibid.

²¹ See for example, this seminal work: Jules David Prown, “Mind in Matter: An Introduction to Material Culture Theory and Method,” *Winterthur Portfolio*, 17 (1982), 1-19.

²² Ibid., 15.

²³ Ibid., 16.

²⁴ As such historical research could perhaps benefit for practices of repetition and re-reading more generally.

²⁵ The participants included PhD students, postdoctoral research fellows and lecturers.

²⁶ UCL, Queen Mary University of London, Royal Holloway University of London, National Maritime Museum, British Museum, King’s College London, Victoria and Albert Museum, Royal College of Art and Goldsmith’s.

²⁷ These included: Geography, Visual Culture, History, English Literature, Science and Technology Studies and Fine Art. It should be noted that the research team and the chosen discussants did not include an archaeologist or a materials scientist and, as such, the project findings do not foreground these important approaches to the study of material culture. Any future iteration of the project might seek to include a different composition of disciplines to discover a different repertoire of connections.

²⁸ For UCL’s Museums and collections, see www.ucl.ac.uk/museums. The choice of object was made freely, but with the help of online catalogues and the advice of relevant museum curators.

²⁹ The objects selected by participants included: a set of foraminifera plaster models²⁹ (Grant Museum of Zoology), a wooden oracular bust (Petrie Museum of Egyptian Archaeology), a red chalk sketch entitled ‘Death of Seneca’²⁹ (UCL Art Museum), dodo bones (Grant Museum of Zoology), weather map printing plates (Galton Collection), a nineteenth-century travel album (UCL Art Museum), Edison Dictaphone tubes (Physiology Collection), a plaster cast of a child’s foot (Pathology Collection), a meteorite (Geology Collections), lantern slides (Galton Collection), a ten-legged stool (Ethnography Collection) and a whistle (Galton Collection).

³⁰ The specialists included anthropologist Ludovic Coupaye (UCL), literary scholars Catherine Richardson (University of Kent) and Chris Laoutaris (University of Birmingham), practising artist Sal Randolph, and historians of science D. Graham Burnett (Princeton University) and Simon Werrett (UCL).

³¹ Graham D. Burnett and Sal Randolph: extracts of F. O'Hara, *Meditations in an Emergency* (New York, 1967), A. Huxley, *Island* (New York, 1962), William James, *The Principles of Psychology* (London, 1902), Théodule-Armand Ribot, *The Psychology of Attention* (Chicago, 1898), Antony Ward, *Attention: A Neuropsychological Approach* (Hove, 2004), James J. Gibson, *The Ecological Approach to Visual Perception* (London, 2014), John Dewey, *Art as Experience* (New York, 1958), Jeremy H. Prynne, "Resistance and Difficulty," *Prospect* 5 (1961), 26-30, A.R. White, *Attention* (Oxford, 1964), Gregory Sholette, *Dark Matter: Art and politics in the age of enterprise culture* (London, 2011), and Maurice Merleau-Ponty, *The Visible and the Invisible* (Evanston, 1968); Catherine Richardson: Bruce Smith, *The Acoustic World of Early Modern England: Attending to the O-factor* (Chicago, 1999); Chris Laoutaris: N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics Literature and Informatics* (Chicago, 1999), 287-91 and Simon Werrett: Simon Werrett, "Recycling in Early Modern Science," *British Journal for the History of Science* 46 (2013), 627-646.

³² R. Sennett, *The Craftsman* (London: Allen Lane, 2008); see also M. Crawford, *The Case for Working with your Hands: Or why office work is bad for us and fixing things feels good* (London, 2009).

³³ Bill Brown, "Thing Theory," *Critical Inquiry* 28 (2001), 4.

³⁴ Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford, 2005); Graham Harman, *Tool-Being: Heidegger and the Metaphysics of Objects* (Chicago, 2002); Ian Bogost, *Alien Phenomenology or What It's Like to be a Thing* (Minneapolis, 2012); Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis, 2013); Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, 2010).

³⁵ See for example, early renditions of the material systems approach such as William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York, 1991); Lynda Nead's *Victorian Babylon: People, Streets and Images in Nineteenth-Century London* (New Haven and London, 2000); Simon Gunn, *The Public Culture of the Victorian Middle Class: Ritual and Authority and Authority and the English*

Industrial City, 1840-1914 (Manchester, 2000) and Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley, 2002). For more recent examples of works that include material systems, see Frank Trentmann, *Empire of Things: How we Became a World of Consumers, from the fifteenth century to the twenty-first* (London, 2016).

³⁶ For example of some of the many historians who have productively engaged with smaller objects and materials over the last ten years, see Dorothy Ko, *Cinderella's Sisters: A Revisionist History of Footbinding* (Berkeley and Los Angeles: 2005); Amanda Vickery, *Behind Closed Doors: At Home in Georgian England* (New Haven and London, 2009); Sophie White, *Wild Frenchmen and Frenchified Indians: Material Culture and Race in Colonial Louisiana* (Philadelphia, 2012); Jennifer L. Anderson, *Mahogany: The Costs of Luxury in Early America* (Cambridge, MA, 2012) and Karen Harvey, "Men of Part: Masculine Embodiment and the Male Leg in Eighteenth-Century England," *Journal of British Studies*, 54:4 (2015), 797-821.

³⁷ Francis Galton, *Hereditary Genius: An Inquiry into its Laws and Consequences* [1869] (2nd edn, London, 1892), 1.

³⁸ *A Descriptive List of Anthropometric Apparatus Consisting of Instruments for Measuring and Testing the Chief Physical Characteristics of the Human Body* (2nd edn, Cambridge, 1889), 4.

³⁹ Francis Galton, *On the Anthropometric Laboratory at the late International Health Exhibition* (London, 1885), 27.

⁴⁰ Galton, *On the Anthropometric Laboratory*, 27.

⁴¹ Francis Galton, *Galton's Whistles for determining the upper limits of audible sound in different persons* (London, c.1876?), 6.

⁴² Francis Galton, *Inquiries into human faculty and its development* [1883] (London, 1907), 27-8.

⁴³ Carolyn Steedman, "Intimacy in research: accounting for it," *History of the Human Sciences*, 21:17 (2008), 22.

⁴⁴ Steedman, "Intimacy in research," 27.

⁴⁵ See Kate Smith, "Attending to the Object at Hand," *100 Hours website*, 2014. <https://ucl100hours.wordpress.com/attending-to-the-object-at-hand-kate-smith/>

⁴⁶ For more on the nature of attention see O'Hara, *Meditations in an Emergency*; Huxley, *Island*; James, *The Principles of Psychology*; Ribot, *The Psychology of Attention*; Ward, *Attention: A Neuropsychological Approach*; Gibson, *The Ecological Approach to Visual Perception*; Dewey, *Art as Experience*; Prynne, "Resistance and Difficulty"; White, *Attention*; Sholette, *Dark Matter: Art and politics in the age of enterprise culture*; and Merleau-Ponty, *The Visible and the Invisible*.

⁴⁷ Bennett, *Vibrant Matter*, 5.

⁴⁸ Many different terms have been used to describe practice as a form of research, but "practice-led research" has become the most commonly used term. For a fuller discussion, see H. Borgdorff, "The Debate on Research in the Arts," *The Sensuous Knowledge Series 2* (Bergen, 2006), www.pol.gu.se/digitalAssets/1322/1322713_the_debate_on_research_in_the_arts.pdf.

⁴⁹ Brad Haseman, "Rupture and Recognition: Identifying the Performative Research Paradigm," in *Practice as Research: Approaches to Creative Arts Enquiry*, eds. Estelle Barrett and Barbara Bolt (London, 2007), 147.

⁵⁰ Peter Reason (ed.), *Human Inquiry in Action: Developments in New Paradigm Research* (London, 1988), 1.

⁵¹ Haseman, "Rupture and Recognition," 156.

⁵² Peter Reason as quoted in Haseman, "Rupture and Recognition," 155.

⁵³ Richard Sennett, *The Craftsman* (London, 2008), 9.

⁵⁴ Rather than fixed research outcomes, our funding body - the Centre for Humanities Interdisciplinary Research Projects (CHIRP) at UCL - allowed us to embark on a project that was open-ended and methodologically focused. For more information on the Centre for Humanities Interdisciplinary Research Projects see www.ucl.ac.uk/chirp.

⁵⁵ Patrick Blackett, "The craft of experimental physics," in *University Studies*, ed. Harold Wright (London, 1933), 67-96. Cited by Simon Schaffer at 'Original or Authentic? The Emergence, Formulation and Realisation of Ideas', an event held at Central St Martins, 21 February 2014.

⁵⁶ Bennett, *Vibrant Matter*, 5.

⁵⁷ Trentmann, "Materiality in the Future of History," 285.

⁵⁸ Auslander, Bentley, Halevi, H. Sibum and Witmore, “AHR Conversation: Historians and the Study of Material Culture,” 1386.

⁵⁹ Ibid., 1379.

⁶⁰ Reconstructing historical structures or technologies has a long tradition within experimental archaeology, but has only been adopted more recently by historians, principally by historians of science: Pamela H. Smith, “In the Workshop of History: making, Writing and Meaning,” *West* 86th 19 (2012), 4-31; Vanessa Agnew, “History’s Affective Turn: Historical Reenactment and its Work in the Present,” *Rethinking History* 11 (2007), 299-312; Ken Albala, “Cooking as Research Methodology: Experiments in Renaissance Cuisine,” in *Renaissance Food from Rabelais to Shakespeare: Culinary Readings and Culinary Histories*, ed. Joan Fitzpatrick (Aldershot, 2010), 73-88; Peter Heering and Roland Wittje (eds), *Learning by Doing: Experiments and Instruments in History of Science Teaching* (Stuttgart, 2011); Klaus Staubermann, “What Machine Tools Can Tell Us About Historic Skills and Knowledge,” *International Journal for the History of Engineering and Technology* 80 (2010), 119-32.

⁶¹ Smith, “In the Workshop of History,” 4-31.

⁶² See, for example, Otto Sibum’s discussion of “tactile history”: <https://etherwave.wordpress.com/2011/12/17/tacit-knowledge-and-tactile-history-otto-sibum-and-gestural-knowledge/>.

⁶³ To further understand the changing nature of water as a substance see Chris Otter, “Locating Matter: The Place of Materiality in Urban History” in *Material Powers: Cultural Studies, History and the Material Turn*, eds. Tony Bennett and Patrick Joyce (London and New York, 2010), 54.

⁶⁴ Arjun Appadurai, “The Thing Itself,” *Public Culture* 18 (2006), 15-21.

⁶⁵ For discussion of embedded and extended cognition (in which objects and environments operate as part of the mind), see Andy Clark and David Chalmers’ seminal paper, “The Extended Mind,” *Analysis* 58 (1998), 7-19.